

Figure A-322. Boeing 720B, AGN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-9)

No. of Engines 3 Engine Rating 14,500 lb

Min. T/O Wt. 101.4 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 160.0 k-lb Max. T/O Wt. War-Time 169.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,750 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 128.1 k-lb Max. Ldg. Wt. 142.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,900 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,250 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	Ultra				High A	Medium B	Low C	Very Low D
	High A	Medium B	Low C	Low D				
128	32	34	36	38	30	31	34	38
143	37	38	41	43	34	35	39	43
160	42	43	47	49	38	40	45	49
169	45	47	50	52	41	43	48	52

Figure A-323. Boeing 727-100

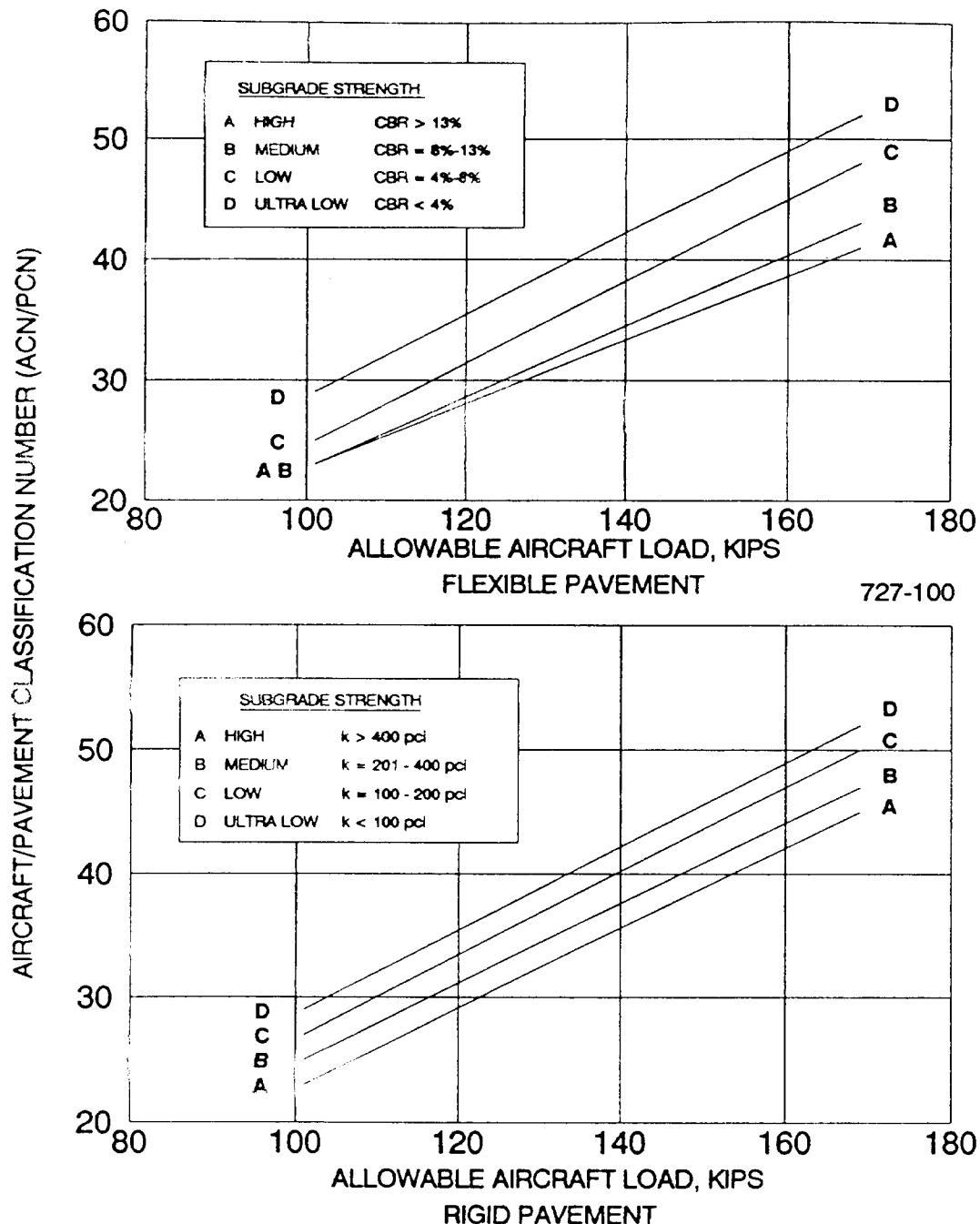


Figure A-324. Boeing 727-100, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-9)

No. of Engines 3 Engine Rating 14,500 lb

Min. T/O Wt. 104.9 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 160.0 k-lb Max. T/O Wt. War-Time 169.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,750 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 136.6 k-lb Max. Ldg. Wt. 142.5 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 5,100 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,250 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C		
137	35	36	39	41	32	34	37	41	
143	37	38	41	43	34	35	39	43	
160	42	43	47	49	38	40	45	49	
169	45	47	50	52	41	43	48	52	

Figure A-325. Boeing 727-100C

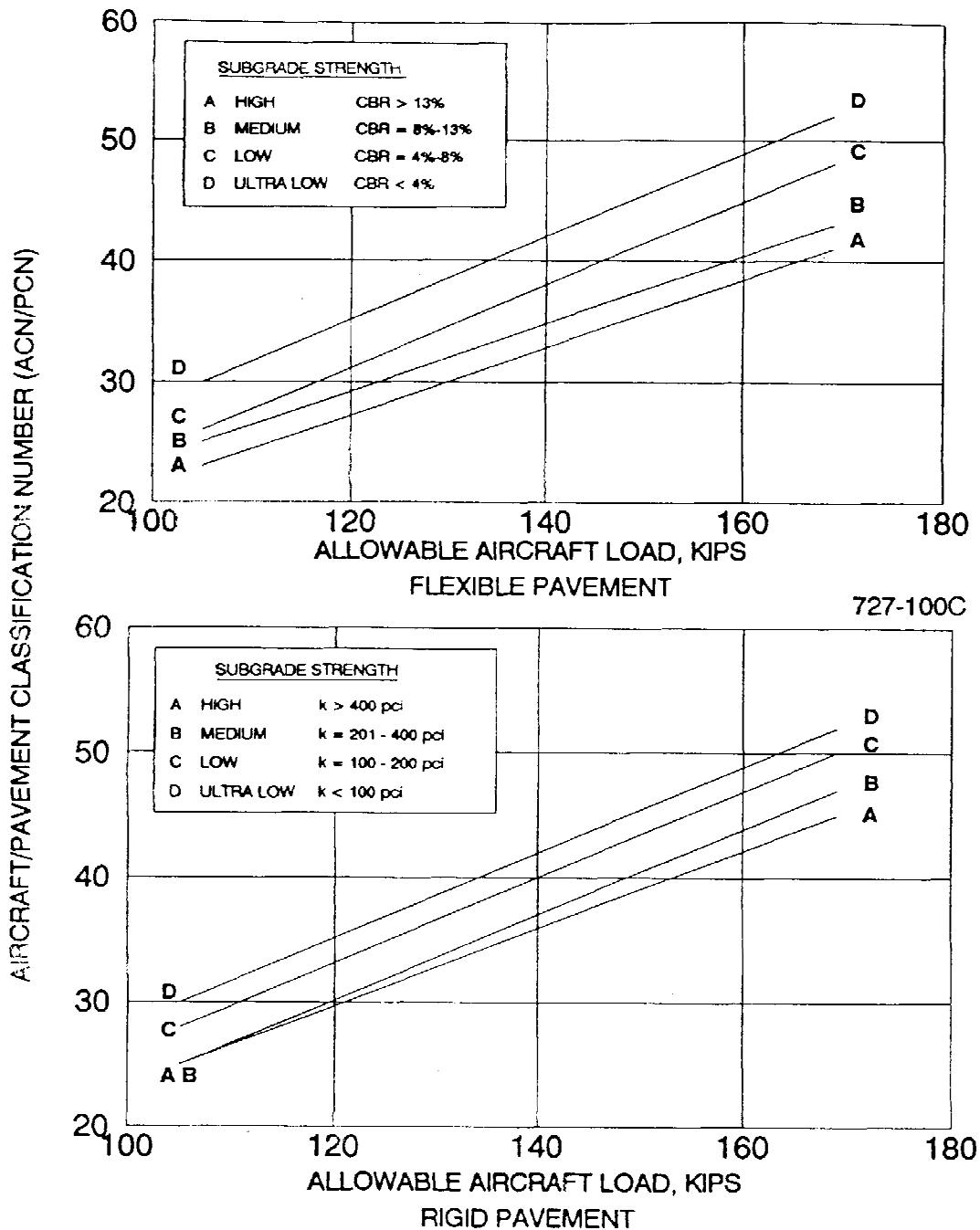


Figure A-326. Boeing 727-100C, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-17R)

No. of Engines 3 Engine Rating 17,400 lb

in. T/O Wt. 119.8 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 209.5 k-lb Max. T/O Wt. War-Time 209.5 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 9,500 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 150.4 k-lb Max. Ldg. Wt. 161.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,600 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
150	39	40	44	45	35	37	42	46
161	42	44	48	49	38	40	45	49
210	58	62	65	67	52	55	61	66

Figure A-327. Boeing 727-200

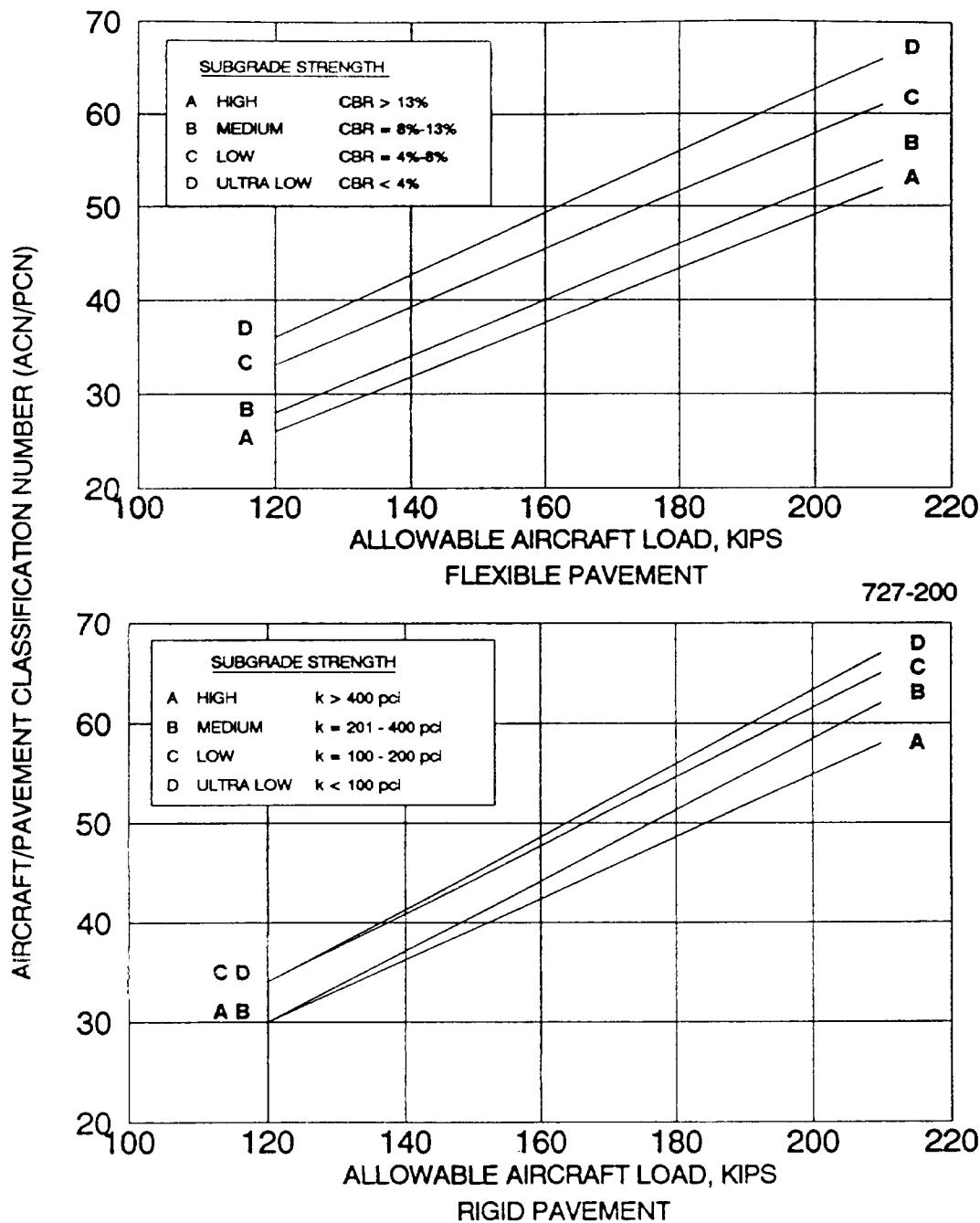


Figure A-328. Boeing 727-200, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-7)

No. of Engines 2 Engine Rating 14,000 lb

Min. T/O Wt. 70.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 110.0 k-lb Max. T/O Wt. War-Time 110.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 92.8 k-lb Max. Ldg. Wt. 99.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,500 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D
	High		Medium	Low	Ultra Low	High		Medium	
	A	B	C	D	A	B	C	D	
93	23	24	26	27	21	21	24	27	
99	25	26	27	29	22	23	26	29	
110	28	29	31	32	25	26	29	33	

Figure A-329. Boeing 737-100

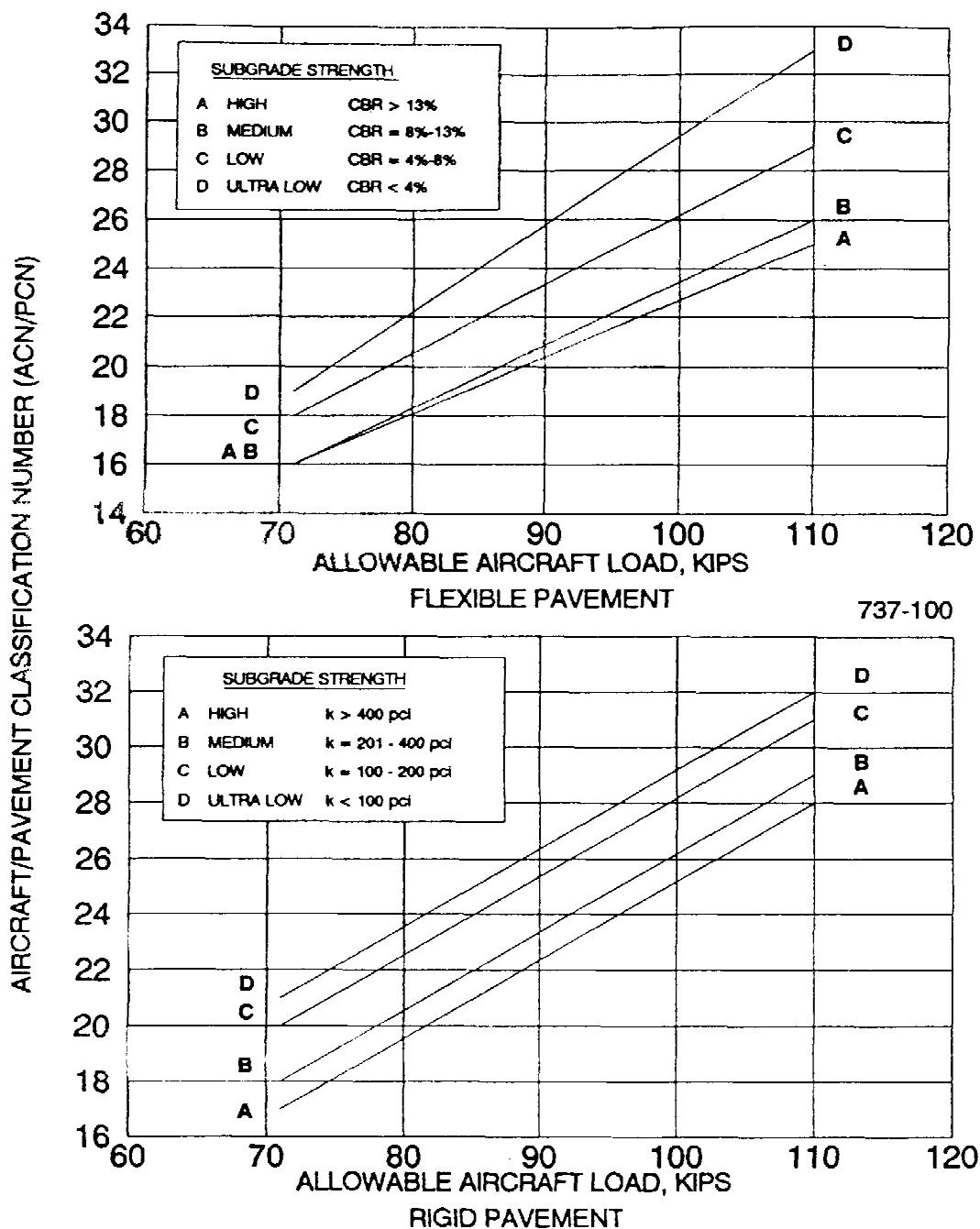


Figure A-330. Boeing 737-100, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT8D-17R/17AR)

No. of Engines 2 Engine Rating 17,400 lb

Min. T/O Wt. 76.0 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 128.1 k-lb Max. T/O Wt. War-Time 128.1 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,800 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 98.6 k-lb Max. Ldg. Wt. 107.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,600 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
99	26	27	28	29	22	23	26	29
107	28	29	31	32	24	25	28	32
128	34	35	37	39	29	31	34	39

Figure A-331. Boeing 737-200

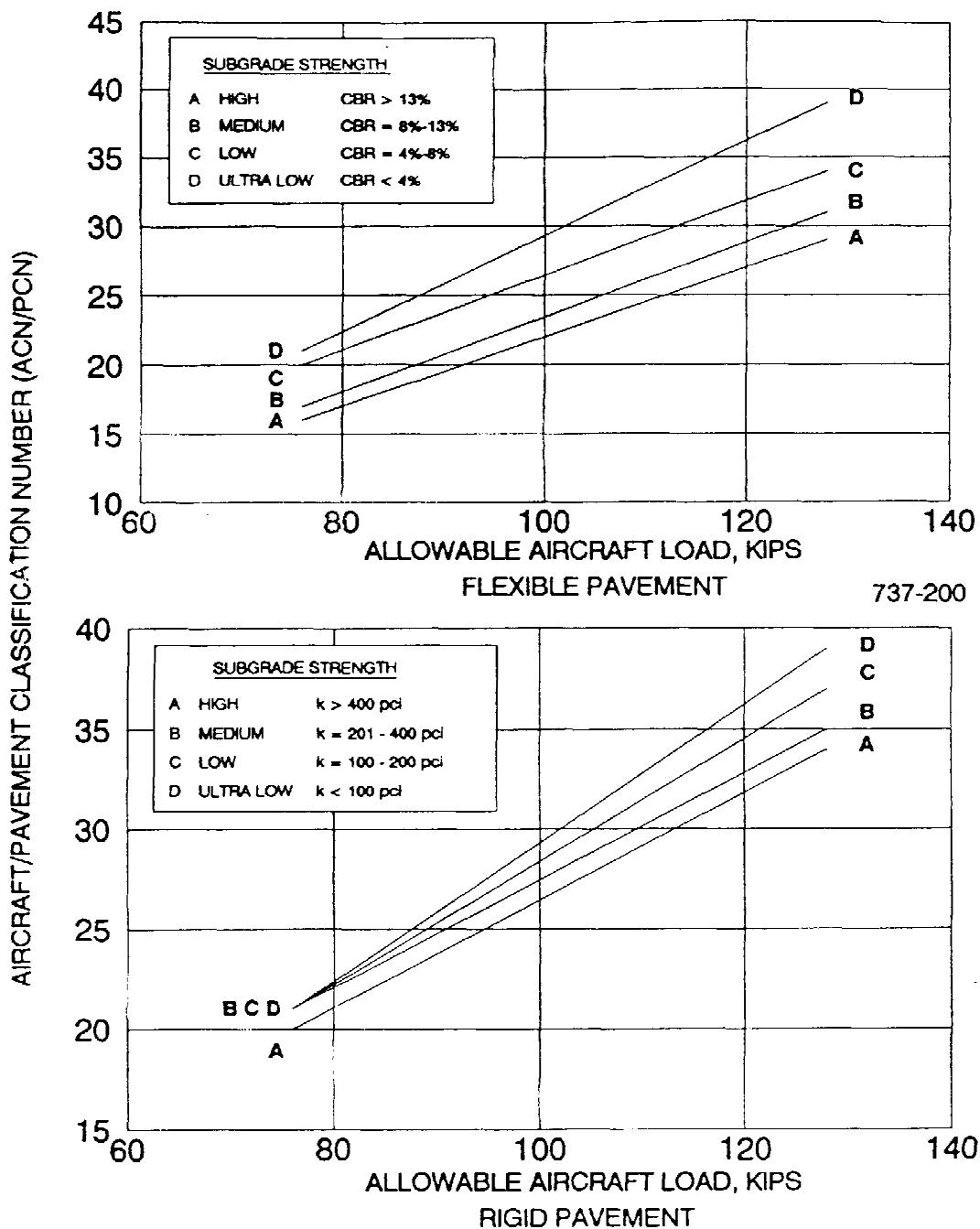


Figure A-332. Boeing 737-200, ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer CFM International (CFM56-3B1)

No. of Engines 2 Engine Rating 20,000 lb

Min. T/O Wt. 83.6 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 135.0 k-lb Max. T/O Wt. War-Time 135.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,500 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 110.2 k-lb Max. Ldg. Wt. 114.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 4,400 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,600 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
110	29	30	32	33	25	26	29	33
114	30	32	33	35	26	27	31	34
135	37	38	40	42	32	33	37	41

Figure A-333. Boeing 737-300

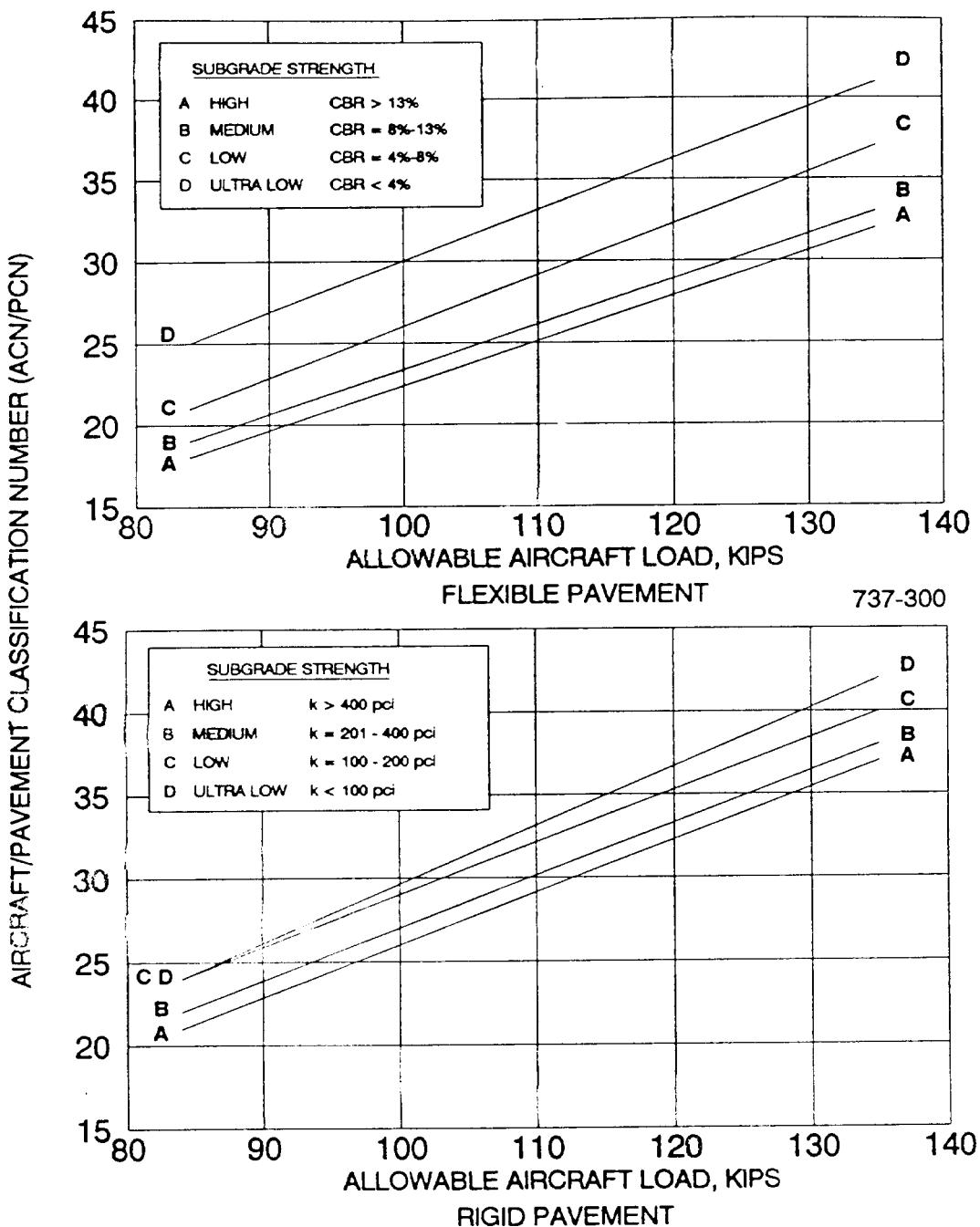


Figure A-334. Boeing 737-200, AGN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer CFM International (CFM56-3C)

No. of Engines 2 Engine Rating 23,500 lb

Min. T/O Wt. 85.2 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 150.0 k-lb Max. T/O Wt. War-Time 150.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 6,100 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 120.7 k-lb Max. Ldg. Wt. 124.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 5,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,200 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
121	34	36	37	39	29	31	34	38
124	35	37	38	40	30	32	35	39
150	43	45	47	49	37	39	43	48

Figure A-335. Boeing 737-400

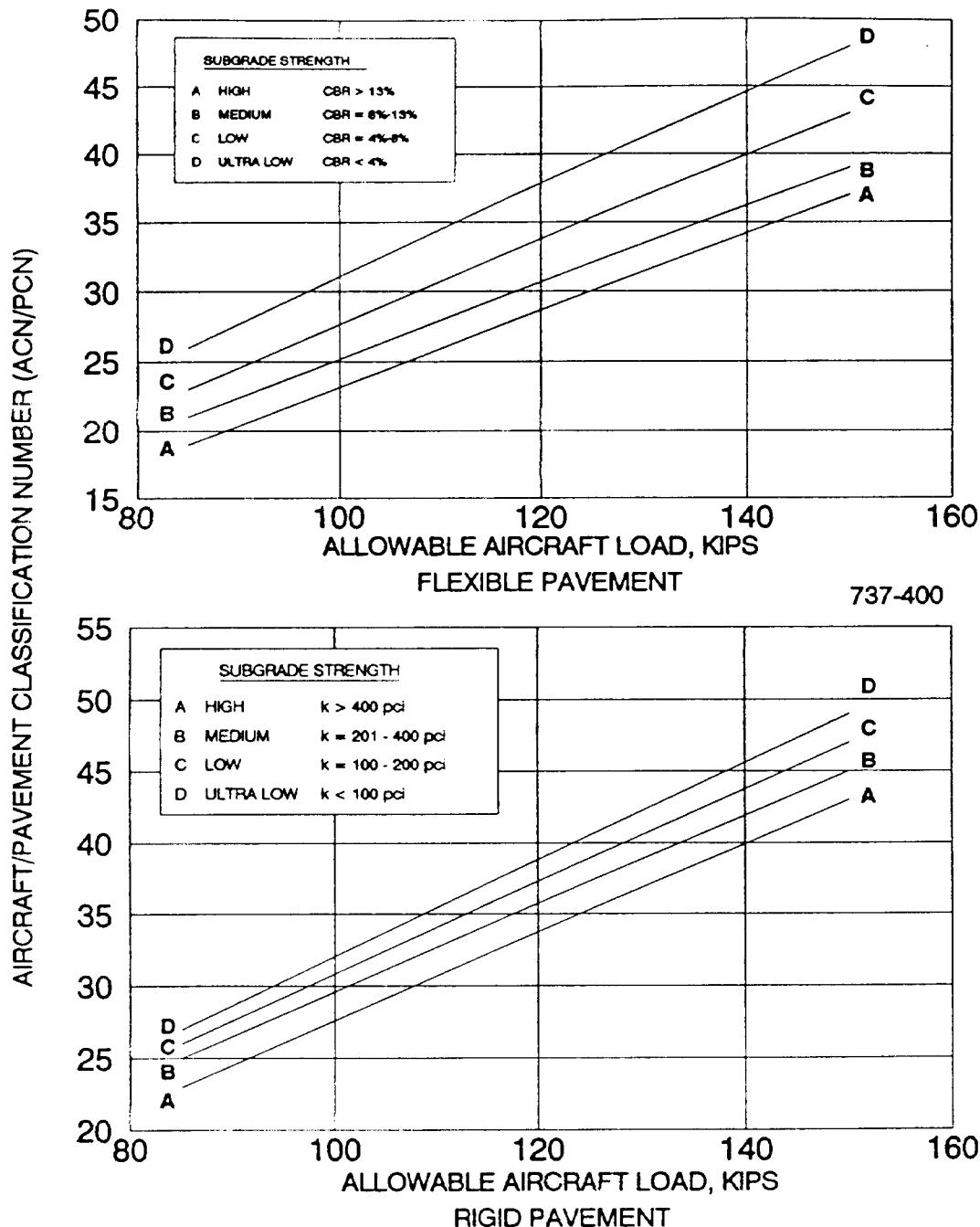


Figure A-336. Boeing 737-400, AGN/PGN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Rolls-Royce (RB211-524C2)

No. of Engines 4 Engine Rating 51,500 lb

Min. T/O Wt. 465.4 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 750.0 k-lb Max. T/O Wt.. War-Time 750.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 9,000 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 573.8 k-lb Max. Ldg. Wt. 585.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,200 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,300 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
574	31	35	42	49	34	37	44	57
585	32	36	43	50	35	38	45	58
750	42	50	60	68	46	52	63	82

Figure A-337. Boeing 747-10GB

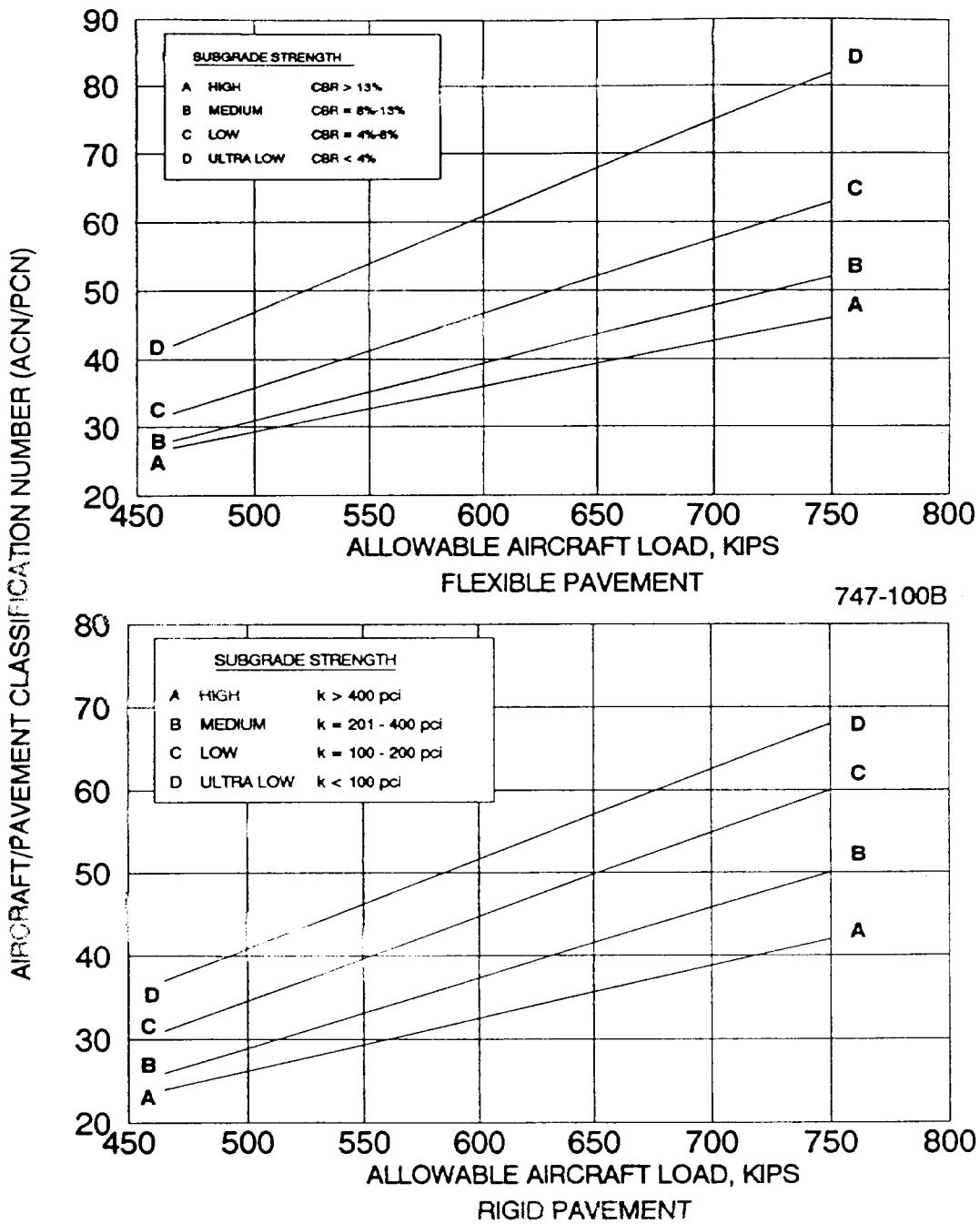


Figure A-338. Boeing 747-100B, ACN/PGN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT9D-7R4G2)

No. of Engines 4 Engine Rating 54,000 lb

Min. T/O Wt. 470.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 833.0 k-lb Max. T/O Wt. War-Time 833.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,200 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 557.9 k-lb Max. Ldg. Wt. 630.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,000 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Very Low D
558	30	34	41	47	33	36	42	55
630	34	40	48	55	38	42	50	65
833	48	56	68	78	53	59	73	94

Figure A-339. Boeing 747-20GB-Passenger

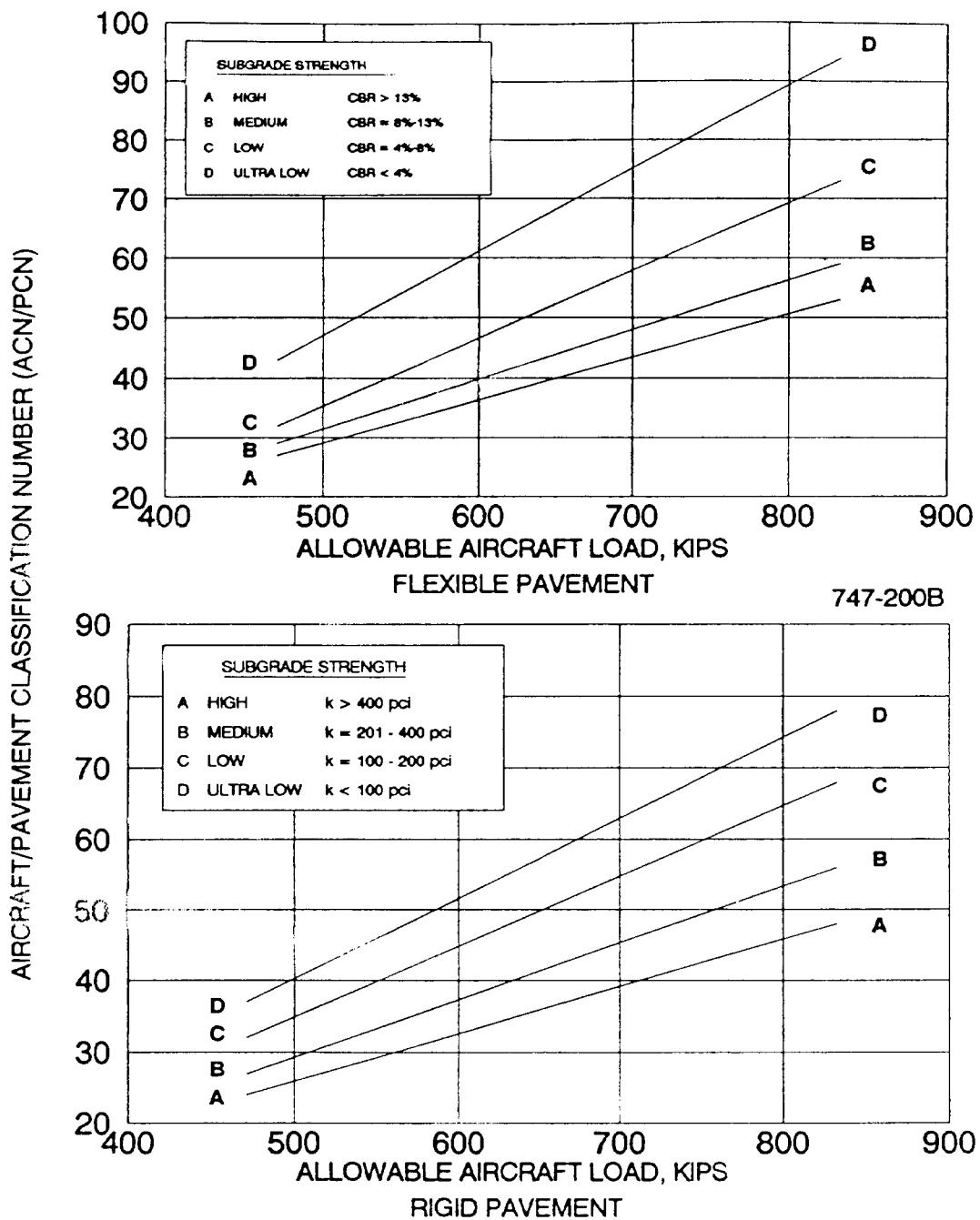


Figure A-340. Boeing 747-20GB-Pass., ACN/PCN Curves

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer Boeing

Aircraft Engine Manufacturer Pratt and Whitney (JT9D-70)

No. of Engines 4 Engine Rating 53,000 lb

Min. T/O Wt. 488.2 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 833.0 k-lb Max. T/O Wt. War-Time 833.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,500 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 621.4 k-lb Max. Ldg. Wt. 630.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. 6,800 ft

* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,900 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C		
621	34	39	47	54	37	41	49	64	
630	34	40	48	55	38	42	50	65	
833	48	56	68	78	53	59	73	94	

Figure A-341. Boeing 747-200C-Cargo